

Figure 1

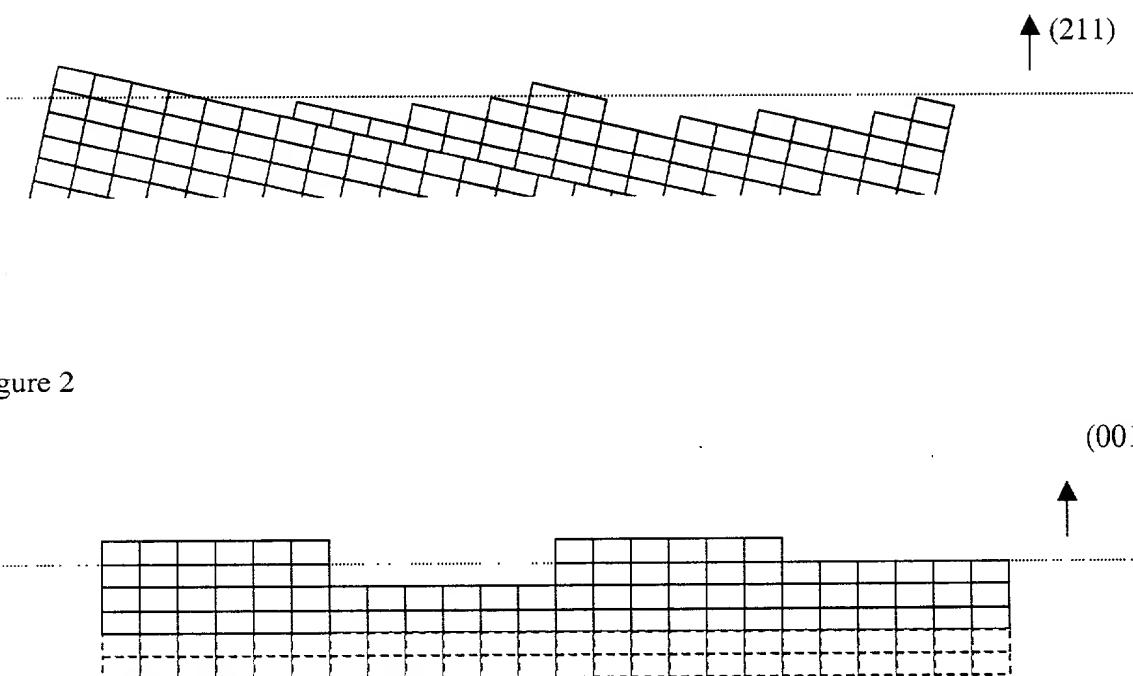


Figure 2

Figure 3

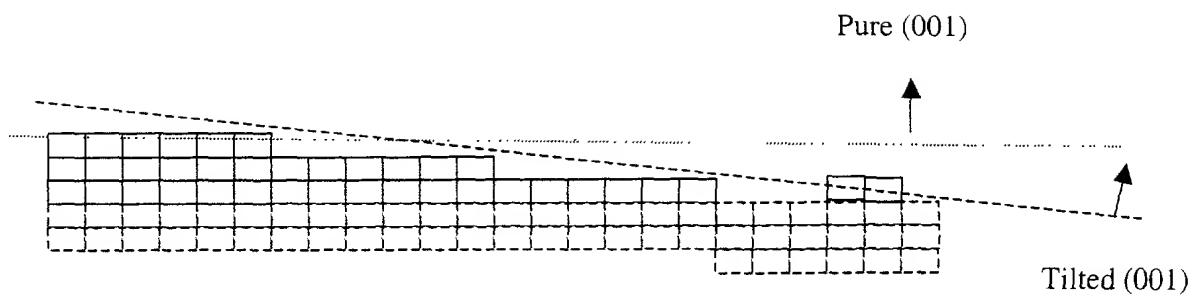
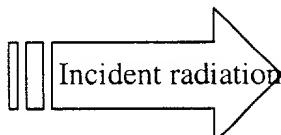


Figure 4

Physical diagram
(schematic)



p-type

n-type

p-type contact
(metal)

n-type contact
(metal)

Energy diagram
(schematic)

Electric field
direction at junction

Wider bandgap allows
radiation to pass with
little or no absorption

Electrons will move towards n-contact

Narrower band gap;
radiation is absorbed and
electrons are excited across
the gap, leaving behind a
hole

Holes (lack of electrons) will move towards p-contact

Figure 5

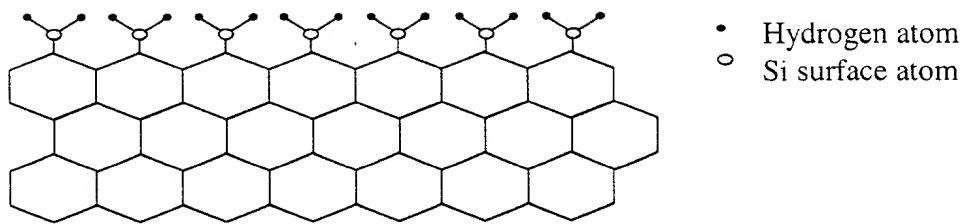


Figure 6

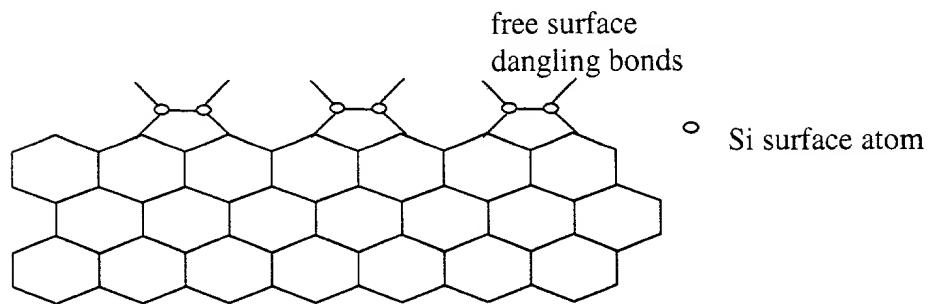


Figure 7

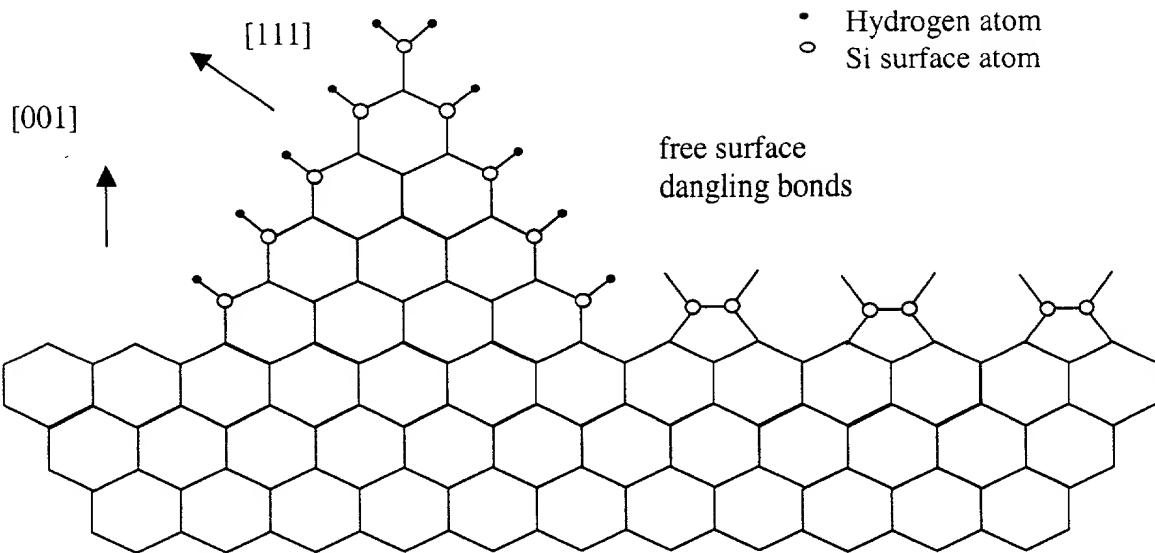


Figure 8

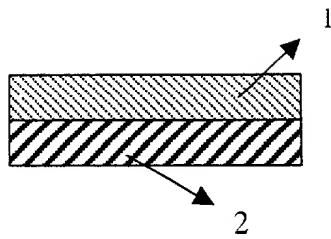


FIG. 9a

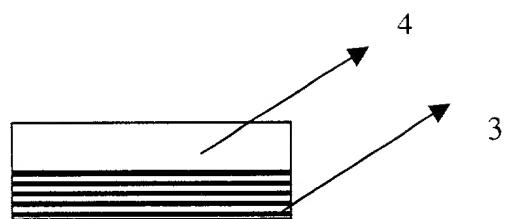


FIG. 9b

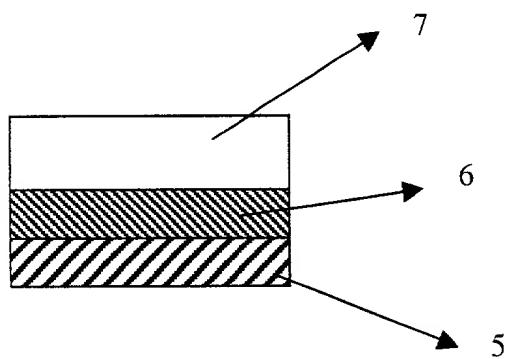
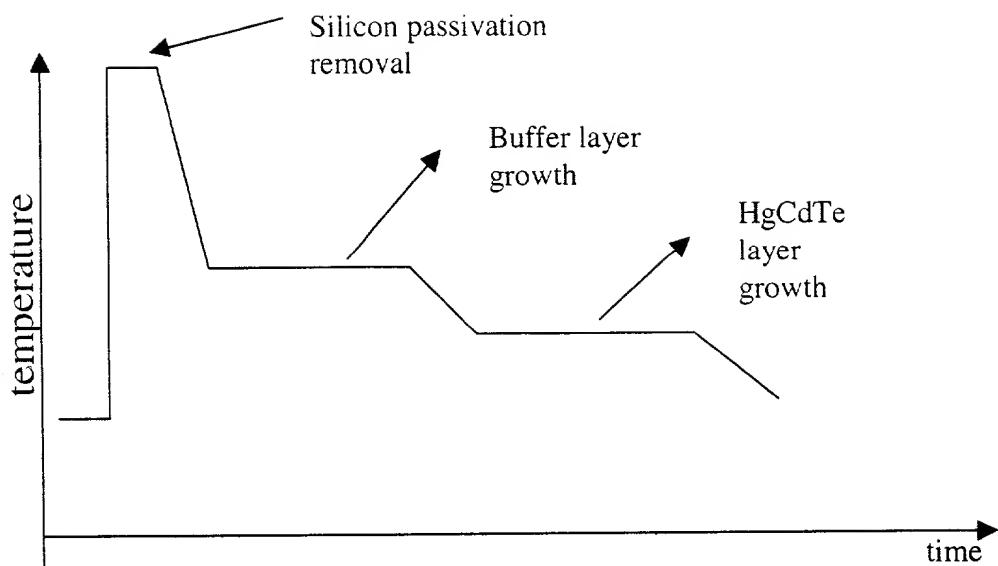
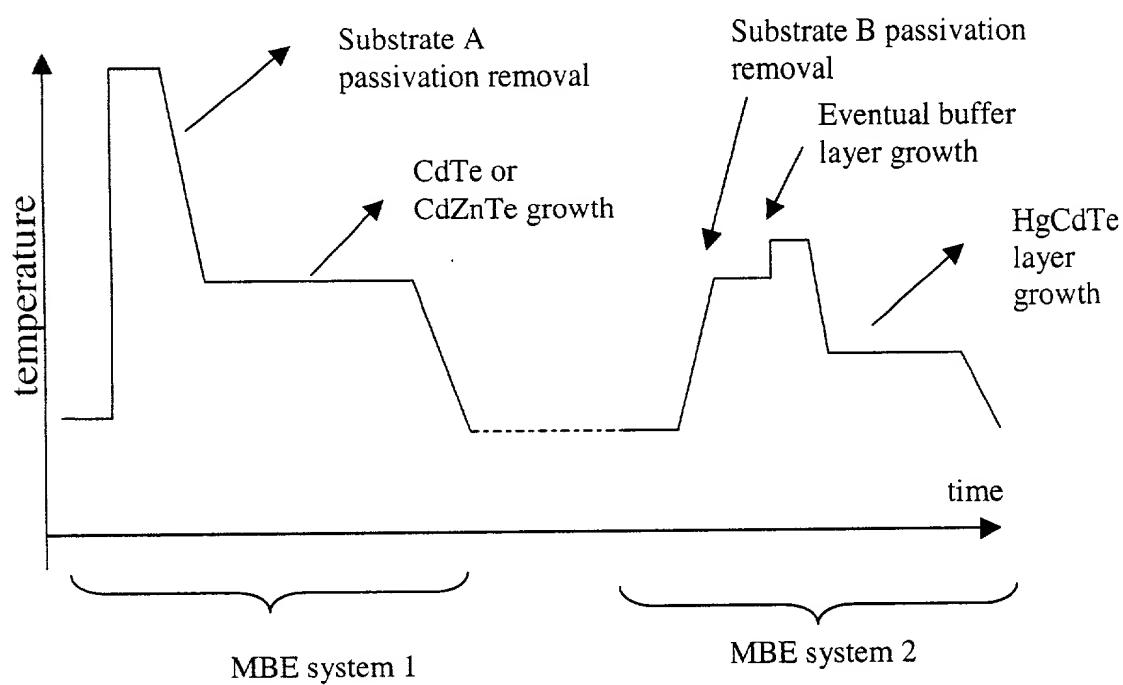


FIG. 9c



(Figure 10a)



(Figure 10b)

Figure 10

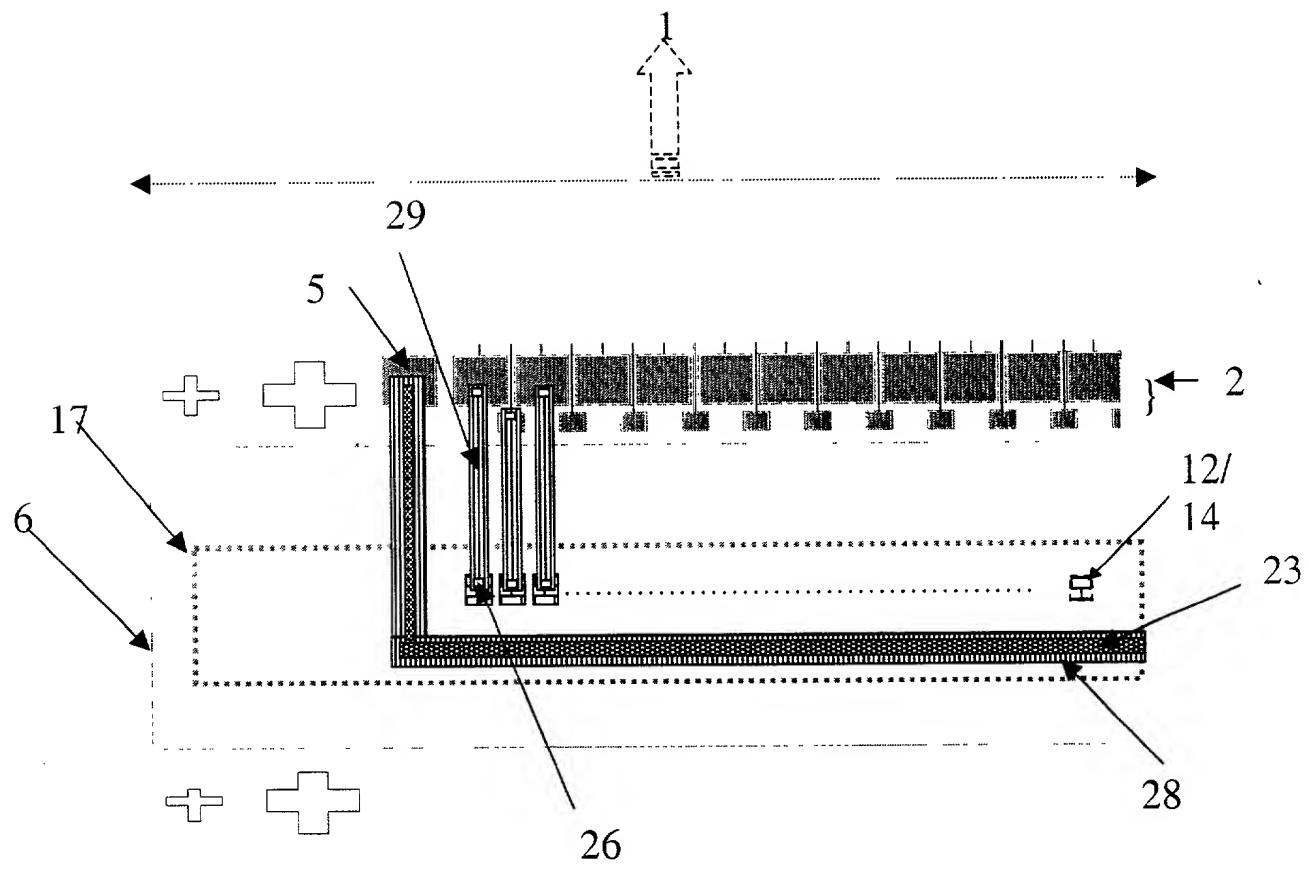


Figure 11

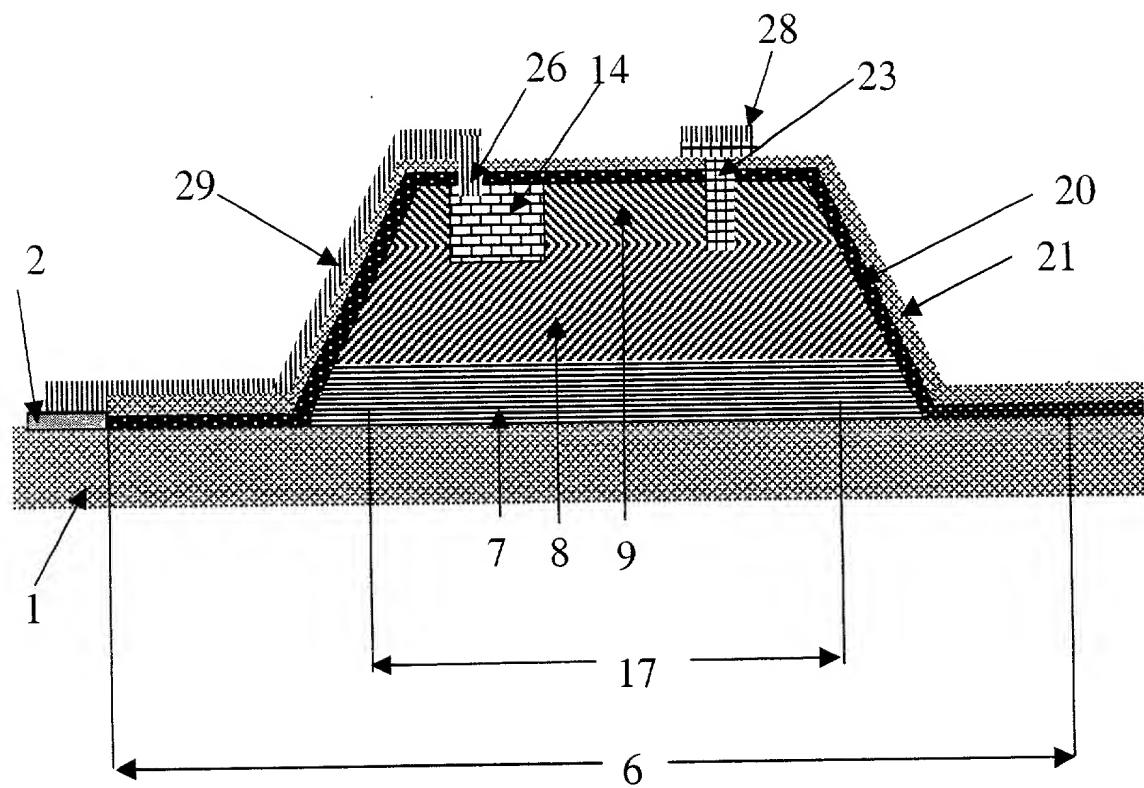


Figure 12

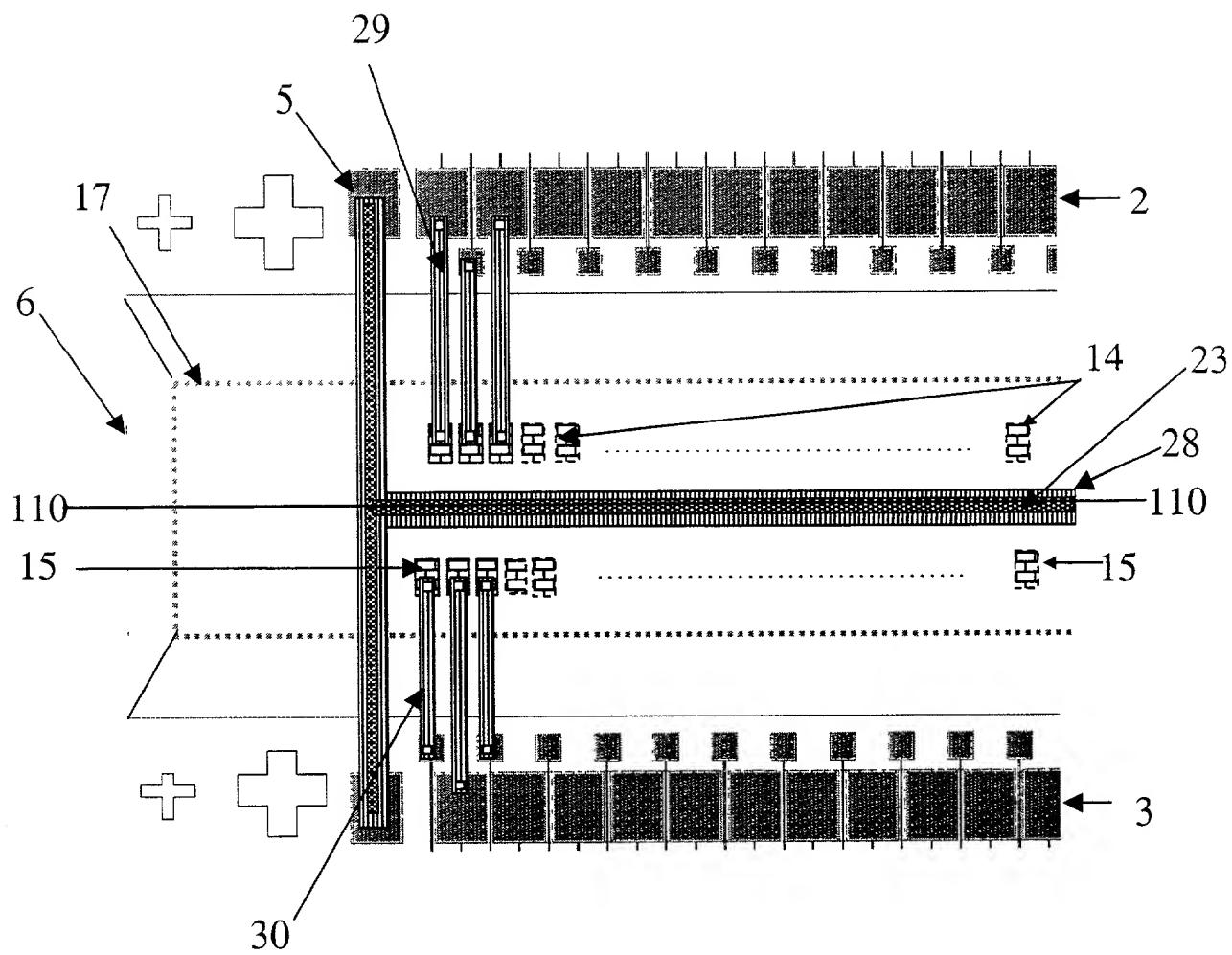


Figure 13

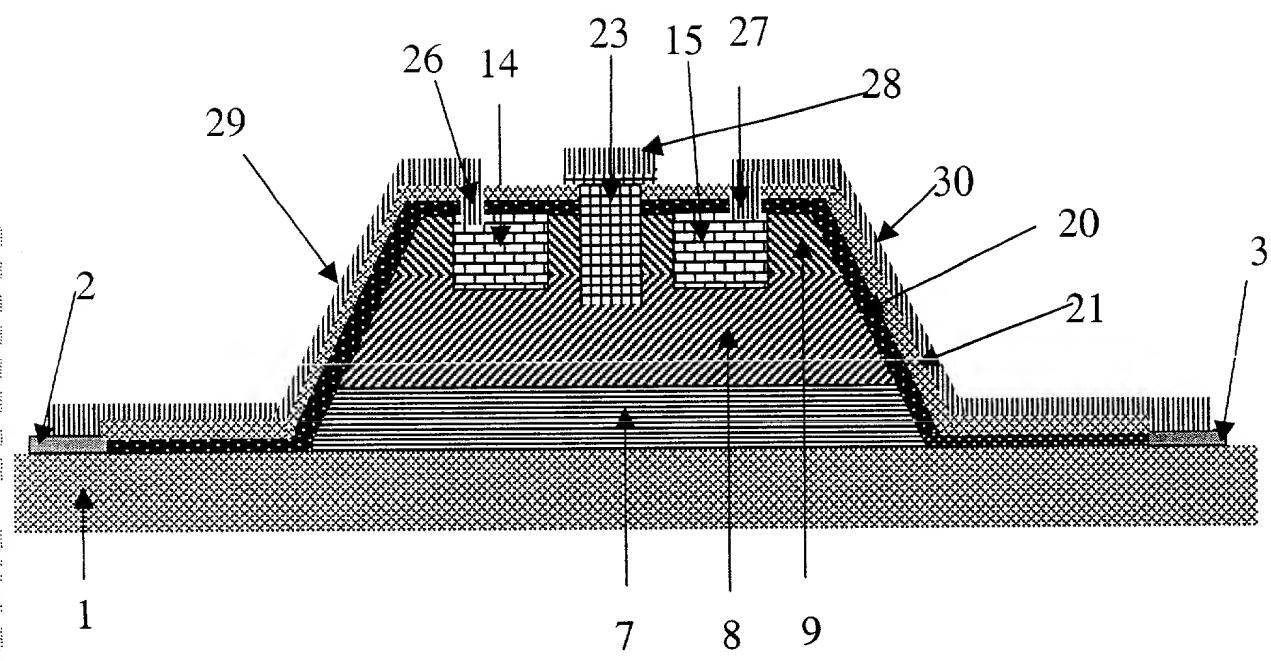


Figure 14

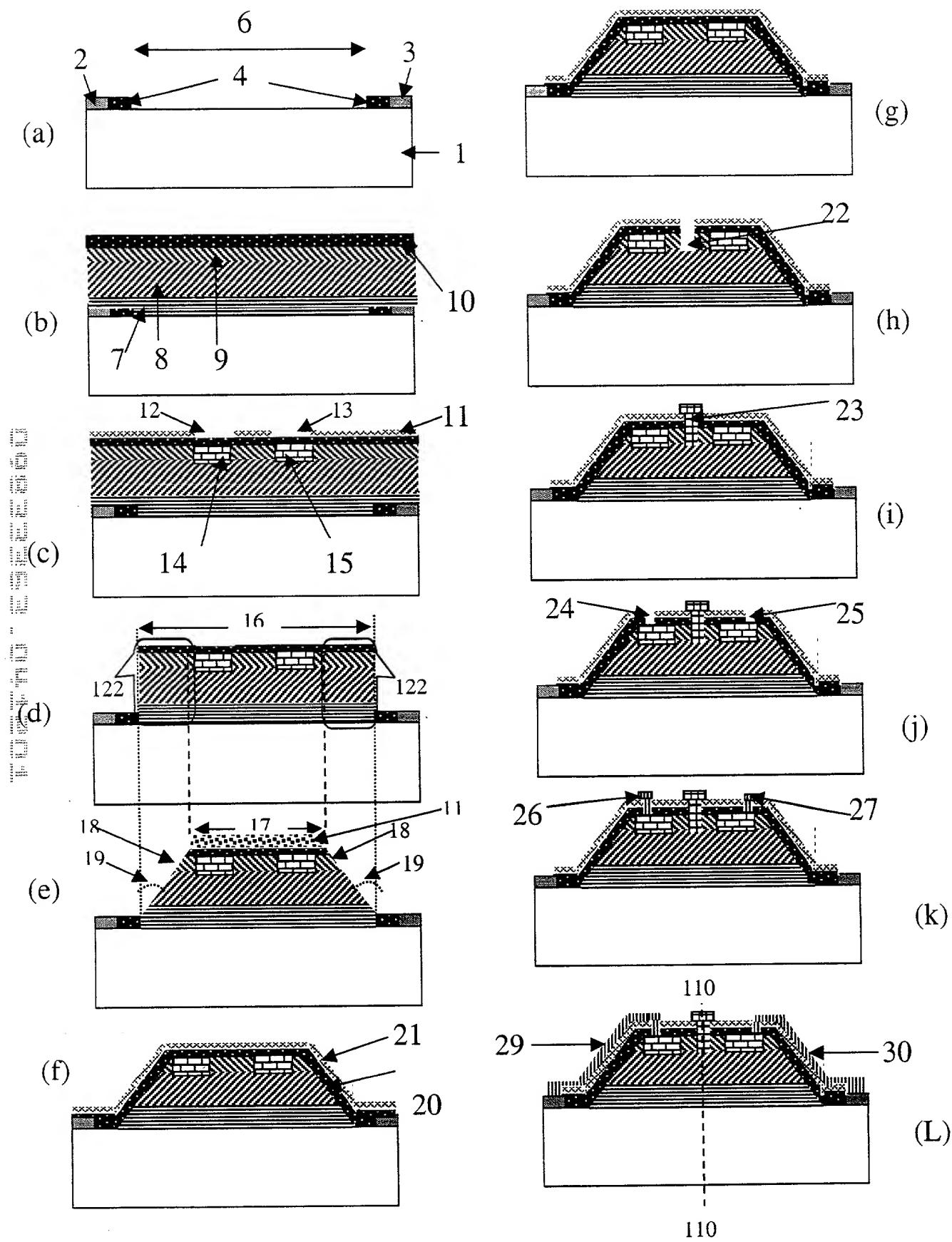


Figure 15

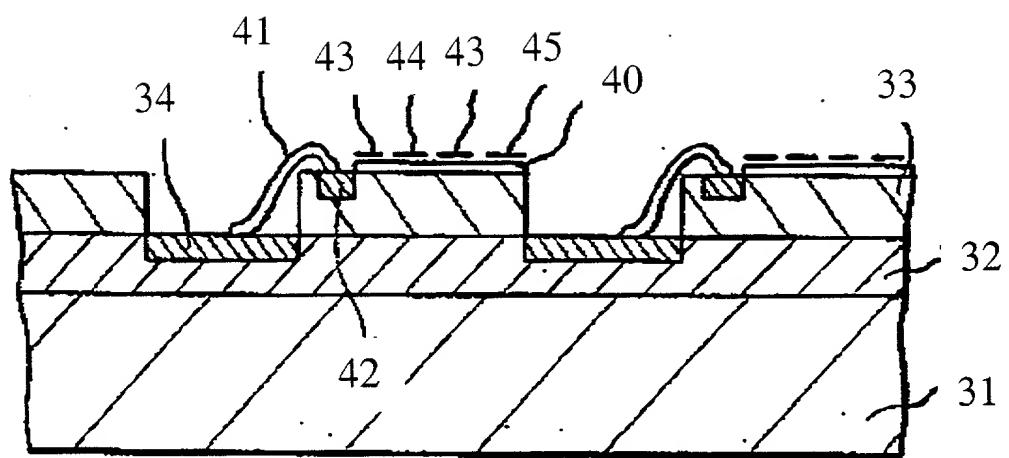


Figure 16 (prior art) – ‘Method A’

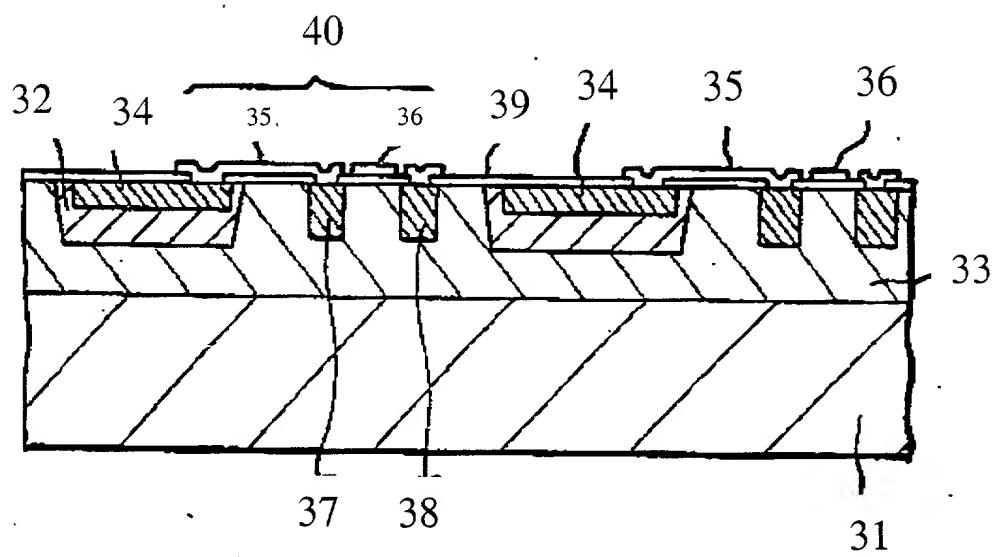


Figure 17 (prior art) – ‘Method-B’

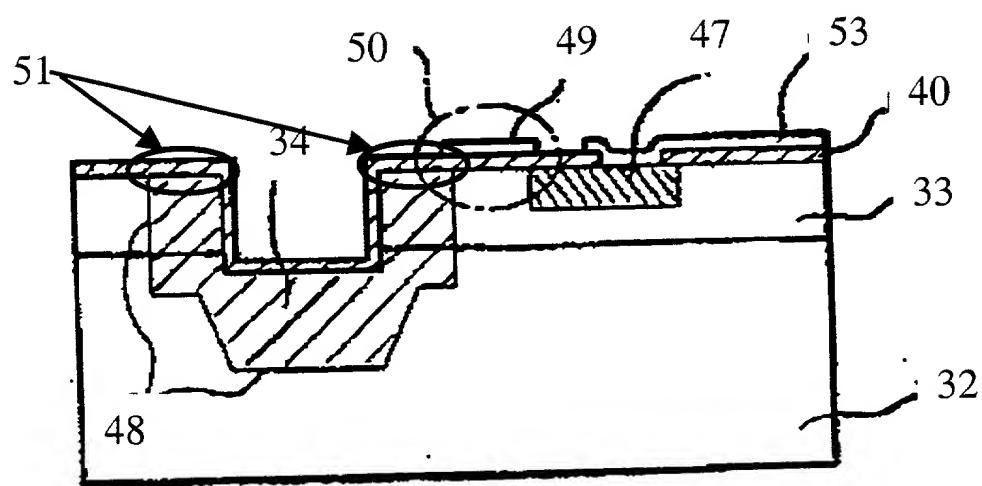


Figure 18 (prior art) – 'Method-C'